



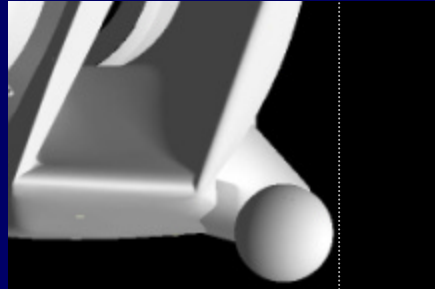
Flying Qualities Integration of the ATFLIR on the F/A-18E/F

Scott R. Hoffman

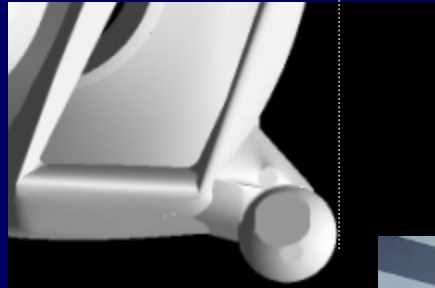
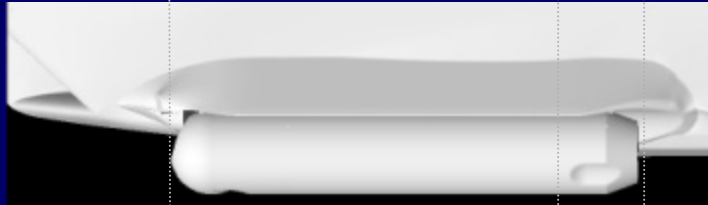




ATFLIR vs TFLIR



TFLIR



ATFLIR



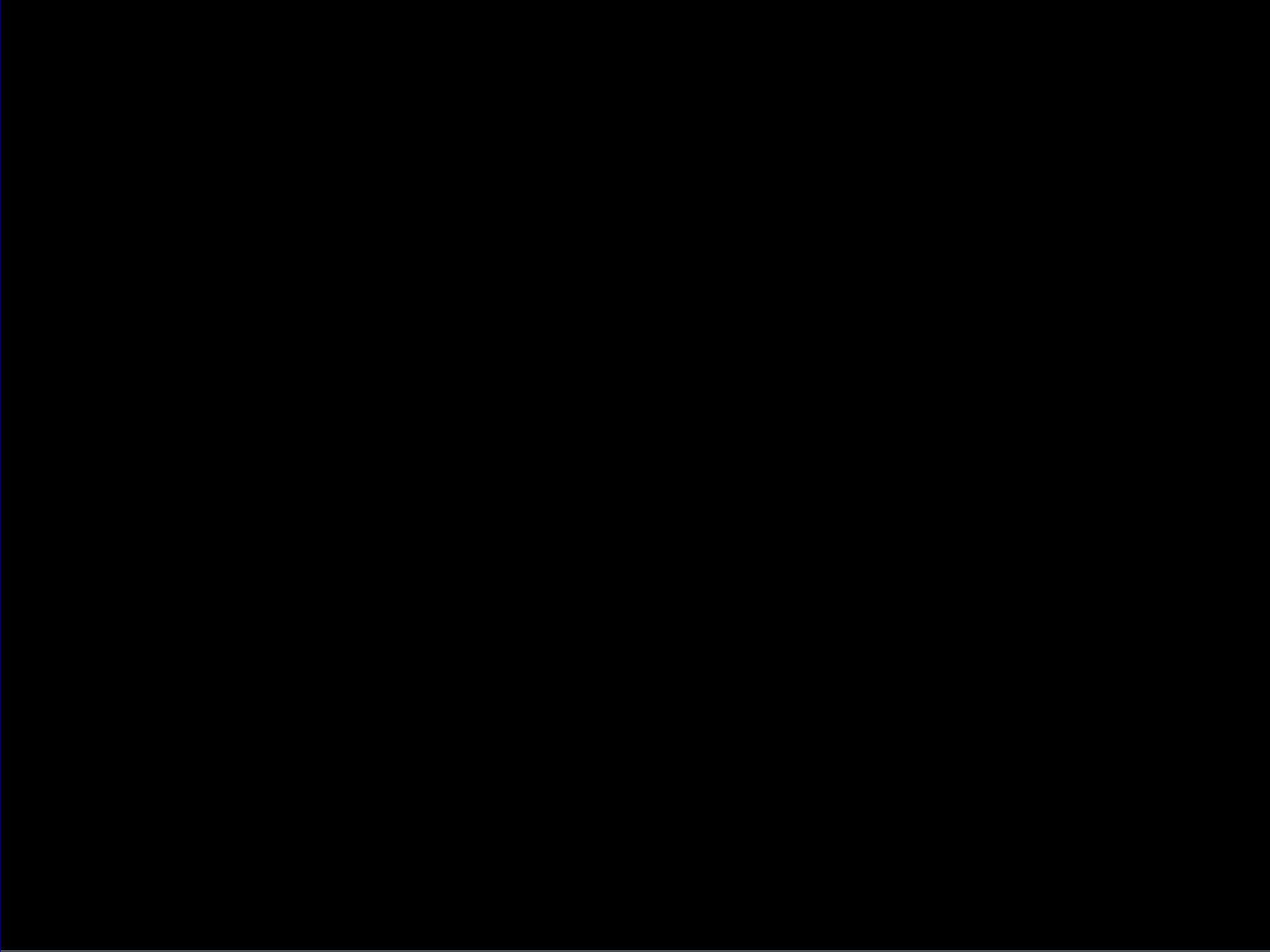
TFLIR



ATFLIR

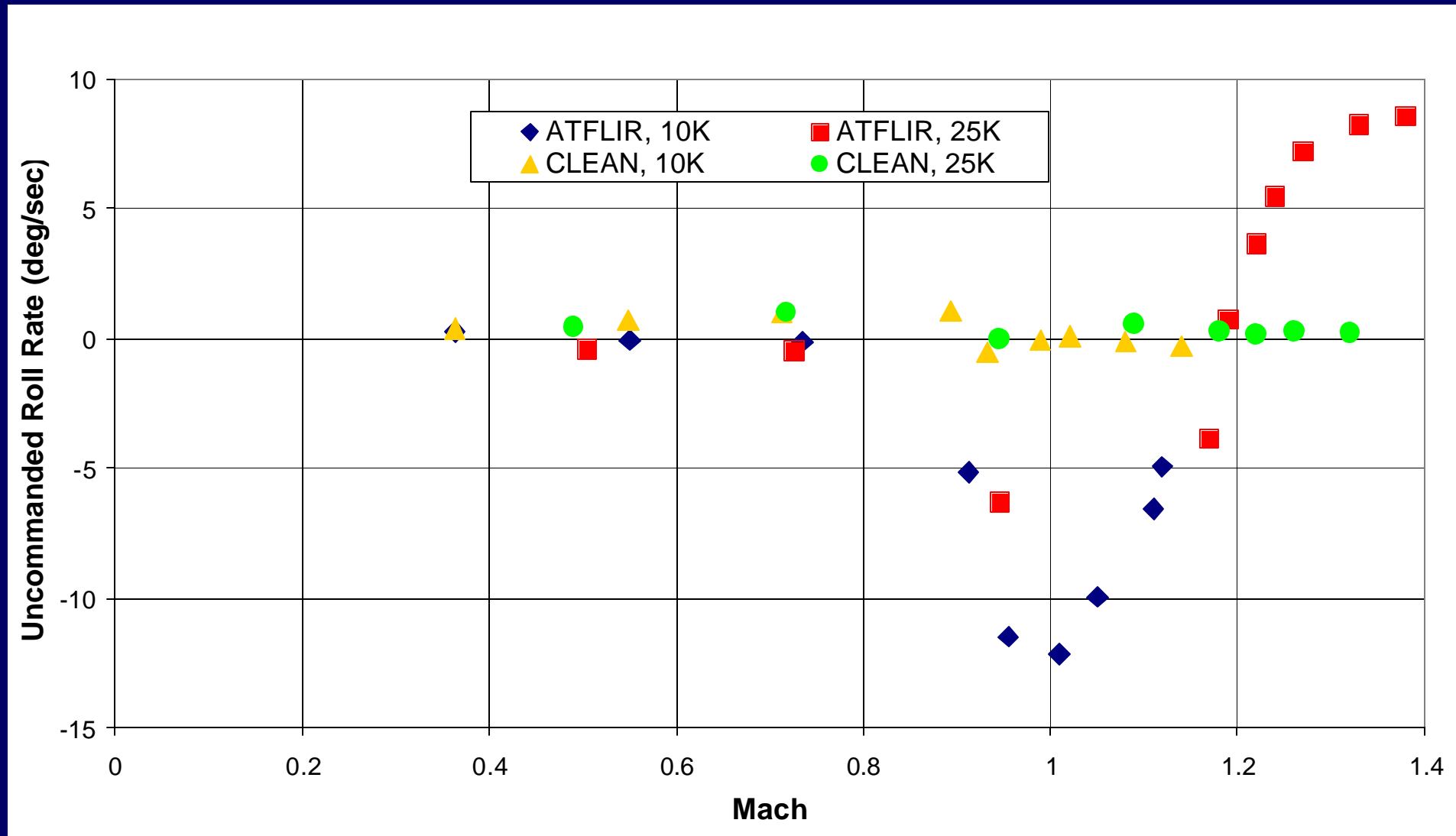








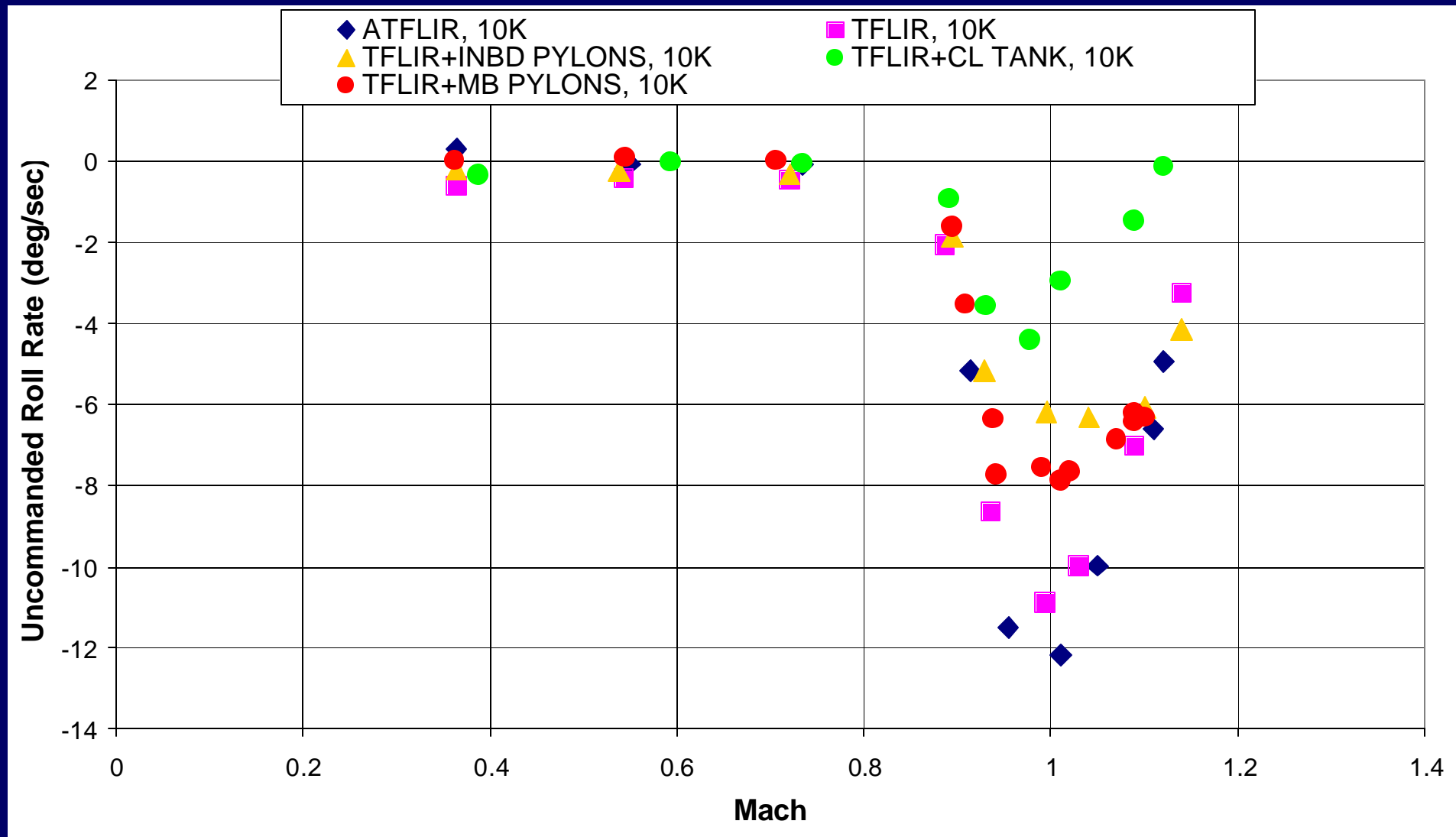
Roll-off Flight Test Data





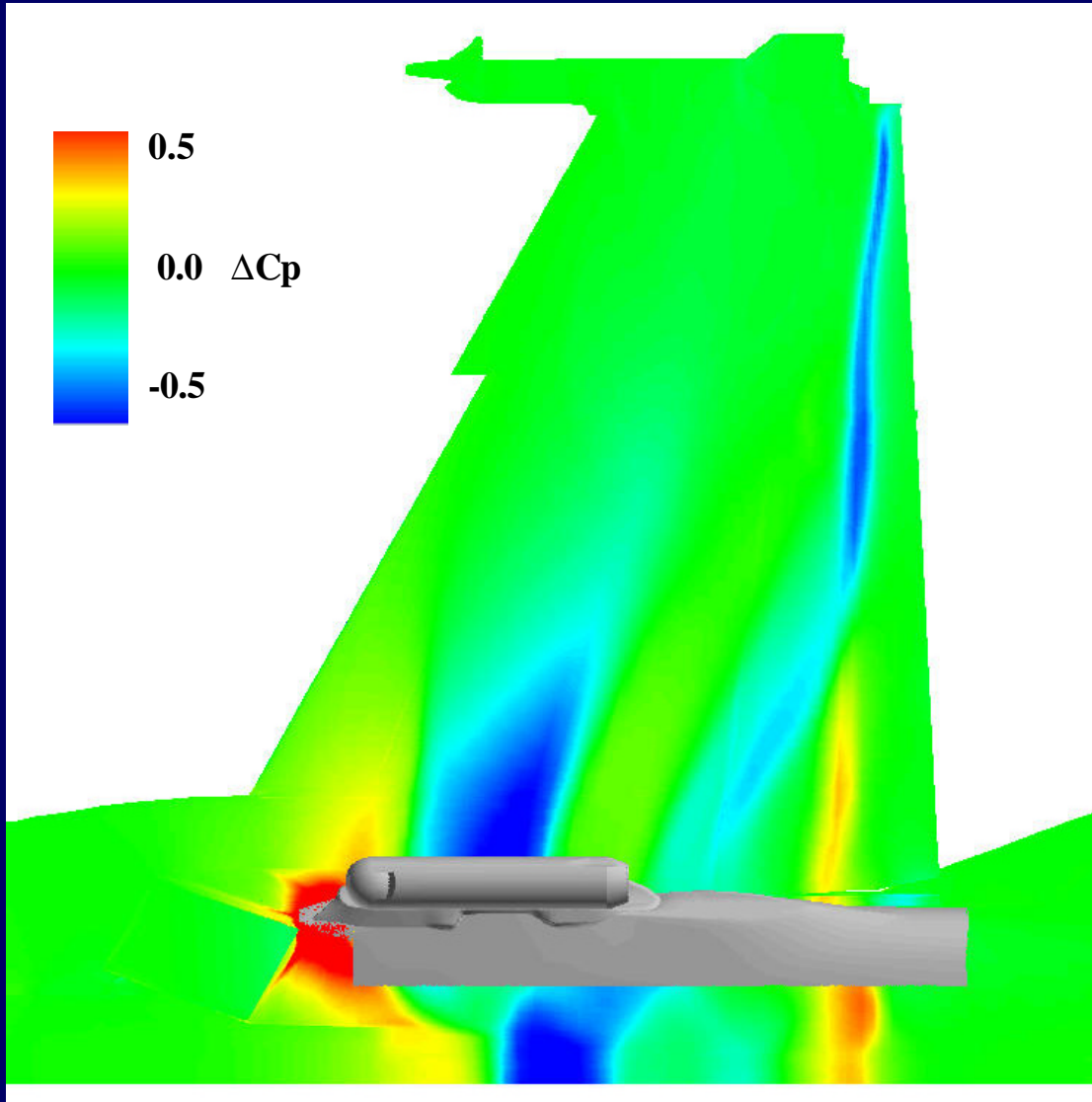


Mitigating Loadings Flight Test Data





CFD Results



Effect of ATFLIR on
Pressure Distribution of
Lower Wing Surface

10,000 ft / 0.94M

1 deg AOA

Flaps 0/2/1

Delta C_p = ATFLIR On –
Clean A/C





Conclusions / Lessons Learned

- Asymmetric carriage of fuselage pods can have significant aerodynamic effects
- Stores and pylons can alter adverse aerodynamic effects
- Beware simulator results of mission task evaluations
- The true test of a handling qualities deficiency is flight test of mission tasks – do them early
- Significant flight test discoveries do not always translate into fleet issues
- CFD results add nice color to a presentation



Questions?